RIVER VALLEY HIGH SCHOOL
2023 JC 2 Preliminary Examination Q1 Suggested Answers

a) Compare the changes in sales share of battery EVs and ICE vehicles between 2018 and 2030. [2]

Sales share of battery EVs increases while that of ICE vehicles decreases.

The rate of change in sales share of battery EVs is lower/slower than that of ICE vehicles.
OR
The decrease in sales share of ICE vehicles is larger than the increase in sales share of battery EVs.

b) With reference to Extract 2, explain why EV charging points should not be classified as a public good. [2]

- EVs charging points are rivalrous in consumption, as evident in Extract 2 where the Singapore government is planning to build more EV charging points to "meet expected EV charging demand", suggesting that a driver's use of a particular charging point means that other EV drivers will not be able to use that particular charging point.

The following answers are NOT acceptable as there is no evidence from Extract 2.

- *EVs charging points are excludable in consumption, for instance, users are required to make payment to charge their cars, similar to how petrol pumps work.*
- *EVs charging points are rejectable, where petrol-car drivers and non-drivers have the option to not use the charging points even though they are provided at public carparks or private residences.*

c) Explain how focusing on EVs by the Chinese government is likely to have benefited the China economy. [4]

As mentioned in Extract 3, China is producing more EVs and batteries to power the EVs. If more factories were built, coupled with increased R&D to push battery technology forward, this has resulted in an increase in investment. At the same time, consumption will have increased as consumers buy more EVs. The increase in consumption and investment will lead to an increase in aggregate demand and as such, multiple increase in national income, bringing about actual economic growth. The increase in quality and quantity of factors of production will also lead to an increase in productive capacity, leading to potential economic growth. As national income increases, more output are being produced (i.e. EVs and batteries), this will generate more jobs especially in the auto manufacturing sector, thus increasing employment.

Extract 3 also pointed out that focusing on EVs has allowed China to reduce importing vehicles from Western countries and it also helps to create another long-lasting export industry. This will help to improve China's balance of trade / balance of payment position as exports increase while imports fall, ceteris paribus. With a rise in exports, it also helps to generate more jobs in the export-related sectors, thus increasing employment.

- At least TWO macroeconomic objectives (EG, employment or BOP) to be touched on.

d) Extract 4 explains that Tesla forges separate pricing strategies in China and the US.

Explain ONE possible cost factor and ONE possible revenue factor to justify this move by Tesla. [4]

Tesla raises price in the US while keeping prices steady in China.

- Demand for Tesla is relatively price elastic in China as Tesla faces competition from EV makers like Nio Inc. and Xpeng while in the US, demand for Tesla is relatively price inelastic as it enjoys a stronger branding and its main rivals are legacy automakers like Ford and General Motors, which generate only a fraction of their sales from EVs. As there are more and closer substitutes in China, demand is relatively more price elastic in China, keeping prices steady or lowering price will probably lead to a more than proportionate increase in quantity demanded and as such, increase total revenue that Tesla can earn in China. One the other hand, increasing price where demand is price inelastic in US will lead to a less than proportionate fall in quantity demanded and thus, an increase in total revenue.
-
- Cost of production is lower in China compared to that in the US as there are cheaper local components, including batteries in China. As such, Tesla can set a lower price in China and yet still earn normal profits to survive.

e) Discuss whether demand factors or supply factors have a greater impact on the adoption of EVs. [8]

Introduction

Adoption of EVs has been unequal globally; with high adoption rates in China as seen in Extract 3 and relatively low rates seen in Singapore in Extract 2. The main barrier to the adoption of EVs tends to be the higher retail prices of EVs compared to that of internal combustion engine (ICE) vehicles. Demand and supply factors hence come into play in determining whether the prices of EVs could potentially fall to levels that are comparable with ICE vehicles.

Requirement 1: Demand factors have a greater impact on the adoption of EVs

Changes in taste and preferences where consumers are persuaded to switch away from ICE vehicle towards EVs do play a part in increasing the adoption of EVs. In China, the advent of local EVs manufacturers who launched successful marketing strategies like optimizing new technologies to meet the real-life needs of consumers as seen in Extract 3, had forged a strong perception of locally built EVs among the locals. This changes taste and preferences and translate to higher demand for EVs.

Government policies to stimulate demand also contributes towards accelerated adoption. There are direct and indirect effects of such policies. For direct effects, tax breaks given in China and rebates given in Singapore has the effect of giving grants to buyers of EVs. This can help to increase the demand for EVs. Indirect effects can be through government spending on the infrastructure required to support the adoption of EV such as the charging network and training automotive workers to pick up skills in servicing EVs as seen in Extract 2. Such complementary investment may convince more potential EV buyers to be willing to buy an EV, hence increasing the demand.

An increase in demand as reflected by a rightward shift of the demand curve from D_0 to D_1 will increase the equilibrium quantity, reflecting a greater adoption of EVs.

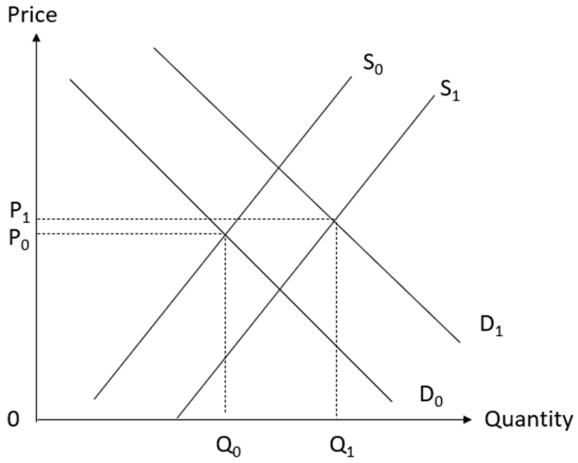


Figure 1 Market for EVs

Requirement 2: Supply factors have a greater impact on the adoption of EVs

Supply factors also have an impact on the adoption of EVs. Government policies in the form of subsidies for EV production as seen in Extract 3 can help to increase the supply of EVs. Subsidies help to lower the cost of production for EV producers. This increases their profitability and incentivizes them to increase their supply.

Lower input prices are also crucial to increasing the supply of EVs. From Extract 3, an important input in EVs is the battery cell which takes up a significant share of the cost of producing an EV. Extract 1 further highlights that the raw materials needed for battery production are in limited supply. Hence, the supply of EVs tend to be rather dependent on the prices of batteries. If more investments are made elsewhere in producing cheaper batteries as seen in China in Extract 3, the input price can be lowered and supply of EVs globally will increase.

An increase in supply will lead to a rightward shift of the supply curve from S_0 to S_1 as seen in Figure 1. An increase in supply will increase the equilibrium quantity of EVs too.

Synthesis/Evaluation

Ultimately, both demand and supply factors do have an impact on the adoption of EVs. Should demand increase rapidly without a corresponding increase in supply, there will be a large increase in the equilibrium price of EV which may derail the progress of the adoption of EVs. An increase in supply without a corresponding increase in demand may also lead to prices that may be too low for producers to make enough profits to stay afloat.

Aside from considering demand and supply factors in the market for EVs, it is pertinent to also consider the changes in the market for ICEs. At the end of the day, consumers will weigh the benefits and costs of adoption EVs. As more countries look to reduce or ban the use of ICEs, the adoption of EVs will receive a boost through this exogenous influence. As technology develops and more manufacturers decide to stop making ICEs, the cost of EVs will drop and EVs might reach price parity with gasoline vehicles, if not lower, then consumers will be more willing to adopt EVs.

Level	Knowledge, Application, Understanding & Analysis	Marks
L2	Well-developed explanation of how both demand and supply factors impact the adoption of EVs, supported by a relevant diagram. Reference made to evidences from extracts that support the arguments made.	4-6
L1	Well-developed explanation of how demand OR supply factors impact the adoption of EVs. Some reference made to evidences from extracts that support the arguments made. OR Under-developed explanation of how demand OR supply factors impact the adoption of EVs. Some reference made to evidences from extracts that support the arguments made.	1-3
Evaluation		
E2	Well-reasoned judgement on whether demand or supply factors have a greater impact on the adoption of EVs.	2
E1	Unsupported judgement on whether demand or supply factors have a greater impact on the adoption of EVs.	1

f) The market for transport can be segmented into the market for private transport (which includes EVs and ICE vehicles) as well as the market for public transport. Discuss whether governments' plan to encourage adoption of EVs is the best policy to improve efficiency of resource allocation in the market for private transport. [10]

Introduction

In the market for private transport, negative externalities arise from the usage for private vehicles. This results in the Marginal Social Cost (MSC) being higher than MPC and the free market output (Qm where MPB = MPC) exceeding the socially optimal level of output (Qs where Marginal Social Benefit = MSC), thus there is over-allocation of resources in the market for private transport and welfare loss of area ABC as seen in Figure 2.

Requirement 1: Explain how governments' plan to encourage adoption of EVs improves the efficiency of resource allocation in the market for transport and its limitation

The government can consider encouraging citizens to switch to using EVs instead. As seen in Extracts 2 and 3, the Chinese government has been actively giving subsidies to EV companies while the Singapore government hands out grants to consumers such that prices of EVs would be lowered.

EVs, unlike traditional ICE cars that relies on petrol or diesel, produces less carbon emissions and less air pollution when used. This means the amount of negative externality generated from the use of EVs will be lesser, and hence, the divergence between MSC and MPC will also be smaller, resulting in a lower MSC'. Thus, the new socially optimal level of output is at Qs' where MSC' = MSB. Since the difference between Qs' and Qm is smaller, the problem of over-usage is also reduced.

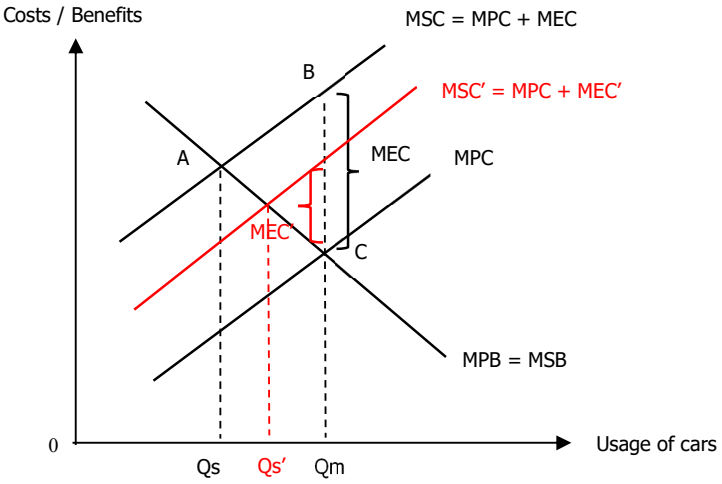


Figure 2: Over-usage of private transport

However, it does not eradicate the problem of environmental pollution as EVs still produce carbon emissions, albeit lesser. Thus, pollution can only be reduced but not eliminated and there is still over-allocation of resources in the market.

Requirement 2: Explain how another policy improves the efficiency of resource allocation in the market for transport and its limitation

Extract 1 mentions that another policy to improve the efficiency of resource allocation in the market for transport would be to promote "greater use of public transportation and alternative modes of travel, including bicycles and walking".

As explained earlier, the allocative inefficiency in the market for transport arises due to the negative externalities from the usage of private vehicles. Thus, one way to reduce such usage would be to encourage individuals to switch to the use of public transport. This can be done via improving the connectivity/ widening the rail transport networks. As individuals switch to public transport, this reduces their MPB of car usage to MPB', leading to a lower level of car usage. The new free market usage of cars occurs at Qm' where MPB' = MPC. Since Qm' is the same as Qs, allocative efficiency is achieved.

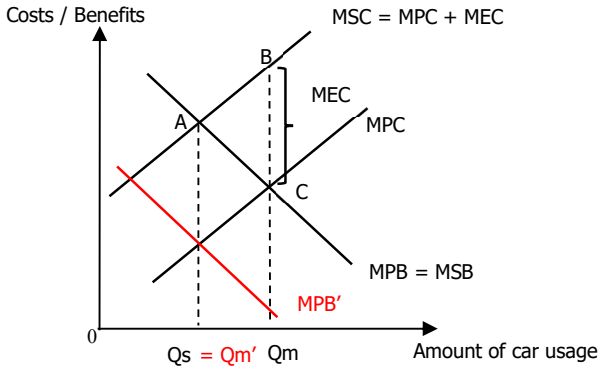


Figure 3: Over-usage of private transport

However, pulling people away from private transport to public transport is a difficult task which requires time, money, expertise to first build up the public transport network and, more importantly, a change in mindset which does not happen overnight.

<u>Summative conclusion</u>

The adoption of EVs is the best policy to improve efficiency of resource allocation in the market for private transport because it tackles the root cause directly by reducing the amount of negative externality (pollution). In addition, promoting greater use of public transport is a more long-term measure which effects will not be seen immediately. Although both aforementioned policies require time to persuade consumers to switch (to EVs or public transport), it might take longer for the public transport infrastructure to be ready to support more individuals. This is in contrast to how the necessary infrastructure required for EVs can be easily developed in terms of setting up charging points and building production facilities, since it can be undertaken by individual firms.

Given that the production of EVs and EV batteries still have significant carbon footprints as explained, the government needs to be mindful that encouraging adoption of EVs may well improve efficiency in one market (that of private transport) at the expense of possibly worsening resource allocation in another market (that of EV battery/ EV production). Thus, the government needs to weigh her cost and benefits on balance before reaching a compromise.

Level	Knowledge, Application, Understanding & Analysis	Marks
L2	Well-developed explanation on how the adoption of EVs can improve efficiency of resource allocation in the market for private transport and its limitation AND another policy and its limitation.	5-7
L1	Under-developed explanation on how the adoption of EVs can improve efficiency of resource allocation in the market for private transport and its limitation AND another policy and its limitation. OR Well-developed explanation on how the adoption of EVs can improve efficiency of resource allocation in the market for private transport and its limitation OR another policy and its limitation.	1-4
Evaluation		
E3	Well-reasoned judgement on whether the adoption of EVs is the best policy to improve efficiency of resource allocation in the market for private transport.	3
E2	Under-developed judgement on whether the adoption of EVs is the best policy to improve efficiency of resource allocation in the market for private transport.	2
E1	Unsupported judgement on whether the adoption of EVs is the best policy to improve efficiency of resource allocation in the market for private transport.	1

RIVER VALLEY HIGH SCHOOL

JC 2 Preliminary Examination

in preparation for General Certificate of Education Advanced Level

ECONOMICS 9570/01

Paper 1 Case Study **18 September 2023**

2 hours 30 minutes

Additional Materials: Answer Booklet

READ THESE INSTRUCTIONS FIRST

Answer **all** questions. The number of marks is given in brackets [ ] at the end of each question or part question.

Answer Question 1 and Question 2 on **separate** booklets. You can ask for an additional booklet if you need more than one for a question.

For each Answer Booklet:
Write your name, Centre number and index number on the first page of all Answer Booklets that you hand in. Write clearly and use capital letters.

For each booklet, use both sides of the paper.
Write in dark blue or black pen. HB pencil may be used for graphs and diagrams only.

DO **NOT** WRITE ON ANY BARCODES.

Write the number of the question you are responding to in the first margin.

Question	Part	
1	ai	
1	aii	

If the question you are responding to also contains parts, for example 1a, write the question part in the second margin.

Do not tear out any part of the Answer Booklet.
All work must be handed in. If you have used any additional booklet, please insert it inside the first Answer Booklet.

Answer **all** questions.

Question 2: Globalization on the world's economies

Extract 1: Singapore, a post-covid winner

Like any small, highly open economy that is heavily engaged in trade, finance and tourism, Singapore has had its share of challenges in dealing with the global health crisis. Nevertheless, it has come through the pandemic reasonably well. In fact, having managed one of the greatest shocks the world economy has experienced, Singapore could even be said to have emerged stronger than it went into the pandemic.

One important reason for Singapore's resilience is economic diversification. Although the city-state is very much a services-dominated economy, manufacturing still accounts for a sizeable 20% of total economic output. Within manufacturing, Singapore is especially proficient in electronics and biomedical products, the very sectors that benefited from the crisis, as demand for work-from-home equipment and medical devices has boomed. Singapore's services sector is also spread across many segments, each with different dynamics, such as financial services, business services, transportation and tourism. Continued expansion in the financial and business services segments helped to offset declines in the air transportation and tourism segments.

In a world marked by financial turbulence and now, the fear of natural disasters such as pandemics or climate change, individuals and companies are seeking ‘safe havens’, like Singapore, to locate themselves, their business operations and their wealth. In fact, large new investments over the past 18 months have been announced in high-value manufacturing, in the electronics sector as well as in pharmaceuticals. Many large companies, including some of the US and Chinese tech giants, have located large business operations in Singapore.

Source: ACCA Global, June 2021

Extract 2: Singapore government pushes ahead with Green Plan

With a scarcity of natural resources and a small domestic market, Singapore's economy has depended heavily on international trade and the global market. Consequently, the country was hit hard by the impact of the pandemic, which disrupted the whole global supply chain, forced many businesses to close and restricted the movements of people and goods.

Singapore's Green Plan aims to harness sustainability as a “new engine of growth” while strengthening the country commitments under the United Nations Sustainable Development Goals and the Paris Agreement on climate change. Under the plan, the government will lead and drive all economic actors to make the transition toward more sustainable economic models, including establishing the country as a hub for green finance, carbon trading and sustainability consultancy. It also creates a welcoming business ecosystem to attract international companies to conduct research and development of sustainability solutions.

“I think a lot of us realise how fragile our supply chains, our need for goods and every other product was in this globalised world," said Mayur Singh, co-founder of The Green Collective SG, a pioneering retail concept showcasing sustainable alternatives to consumers and businesses seeking "to live, eat and dwell responsibly”. Many entrepreneurs are also developing and adapting new software to promote a shift toward sustainable practices, including precision urban farming, local food sourcing, and energy efficiency at home and in the workspace.

Source: Bangkok Post, June 2021

Extract 3: The role of trade in addressing climate change

Supply-chain linkages mean that foreign climate events, such as floods, landslides, and wildfires, severely impacting world's leading stock markets, with negative effects on globalised firms. Rich countries thus have a direct financial interest in financing climate adaptation and mitigation in other nations. Global firms with extensive supply-chain operations, such as those in the automobile industry, are a natural constituency for climate finance within advanced economics. These firms suffer share-price declines when foreign climate events disrupt their global supply chains, which gives them a stake in seeing climate finance progress at the international level. Thus, advanced economies have every incentive to mitigate these risks through providing climate adaptation finance.

The expansion of global supply chains is an important reason why solar and wind power production has exploded over the past decade. Low-cost solar modules and wind turbines, produced mainly in China, have reduced the price of clean technologies globally, thereby encouraging their use. However, geopolitical tensions between the U.S. and China since 2019 could disrupt clean tech global supply chains and threaten to reduce these environmental gains. Over the past decade, the U.S. has erected trade barriers on imported clean tech products from China and policymakers are considering whether to ramp up these efforts in order to shift clean tech production and employment from China to the U.S. In response to the tariffs, production shifted from China to Vietnam and other Asian economies. Since many of the firms in Asia that now assemble solar modules are Chinese-owned, and/or use components produced in China, the tariffs also had little impact on China's relative economic position in clean tech. While U.S. tariffs likely had a neutral effect on imports of renewable energy-related products to the United States, they did lead China to retaliate. An escalating trade war in clean tech helps no one and is harmful to the environment because it raises the costs of clean tech products.

On the goal of promoting clean tech jobs in the U.S., Professor Davidson encourages policymakers to pay attention to the sector as a whole, which includes installation of clean technologies as well as production. Since clean tech installation is a service that must be performed locally, these jobs will not only increase in number; they will also be immune to offshoring, which suggests additional political-economy benefits relative to manufacturing jobs.

Source: University of California San Diego, November 2021

Figure 1: Trade Balance between Vietnam & Major Trading Partners (in US$ billion)

Source: Vietnam Briefing, Aug 2021

Extract 4: Globalisation in a Post-Pandemic World

For countries, globalisation in the form of participation in global supply chains has its risks and rewards.

It is very difficult for a single firm to possess the breadth of capabilities necessary to produce everything by itself. Therefore, global supply chains facilitate firms' sourcing of the most suitable inputs and components from all over the world to put together higher-quality and lower-cost products. Manufacturers in most industries have turned to suppliers and subcontractors who narrowly focus on just one area. Such an arrangement offers benefits. It gives a lot of flexibility in what goes into their products, and firms are better able to incorporate the latest technology in their production. But they are left vulnerable when they depend on a single supplier somewhere else for a crucial component or material. If that supplier only manufactures in a single plant or country, disruption risks are even higher.

At the same time, consumers increasingly want low prices, especially in a recession. Competition will ensure that firms will not be able to charge more just because they manufacture in higher-cost home markets. In addition, the pressure to operate efficiently and use resources more productively will continue.

Such risks and rewards are especially evident during the pandemic. Lockdowns have led to staffing constraints in the shipping industry, where ports emerged as choke points for global trade as lines of container ships waiting outside major harbors. At the same time, it also facilitated alternative sources of demand when post-pandemic recovery in the domestic economy remained weak.

Source: Harvard Business Review, October 2020 and The Economist, 31 Mar 2021

Questions

(a) Using Extract 1, explain one factor that contributed to Singapore's economic resilience. [2]

(b) Using a diagram and Extract 1, explain how Singapore's 'safe haven' role is likely to affect the value of her currency. [3]

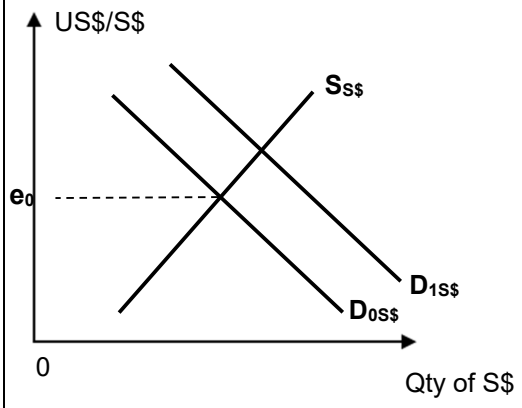
(c) With reference to Extract 2, explain how sustainable growth in Singapore can be achieved through the Green Plan. [5]

(d) Describe the change in Vietnam's trade balance with US and China from 2018 to 2020. [2]

(e) With the use of a diagram, discuss the extent to which tariffs on imported clean tech products from China can grow the green tech industry in the US. [8]

(f) Discuss whether globalisation poses more risks or rewards to an economy. [10]

[Total:30]

(a)	**Using Extract 1, explain one factor that contributed to Singapore's economic resilience.** One factor that contribute to Singapore's economic resilience is economic diversification [1]. As mentioned in Extract 1, while Singapore is a "services-dominated economy, manufacturing still accounts for a sizeable 20% of total economic output", and even within the services sector, it spread across many segments, such as "financial services, business services, transportation and tourism". Hence, when there is a negative supply shock that cause a fall in demand in one sector, other sectors will help to dampen the fall in demand, allowing a Singapore to experience stability in its economy[1].	[2]
(b)	**Using a diagram and Extract 1, explain how Singapore's 'safe haven' role is likely to affect the value of her currency.** As mentioned in Extract 1, US and China tech giants have "located large business operations in Singapore" due to Singapore's 'safe haven' role. This causes the demand for SGD by foreign investors to increase from $D_{0S\$}$to $D_{1S\$,}$ as seen on Figure 1, as they search of lower risk returns [1]. This will increase the value of SGD in the forex market.[1] Diagram – [1] *Note: Diagram mark will only be awarded if it is well referenced and well-labelled. Students will not be penalised if they left out one 'less significant' aspect of the diagram (e.g., origin)*  Figure 1	[3]
(c)	**With reference to Extract 2, explain how sustainable growth in Singapore can be achieved through the Green Plan.** Sustainable growth is achieved when the rate of economic growth can be maintained without creating other significant economic problems. Through government efforts in ensuring in transiting towards more sustainable economic models, it will help to make Singapore a more attractive place for	[5]

	"international companies to conduct research and development of sustainability solutions", increasing foreign direct investments, leading to an increase in I. [1] As I is a component of AD. Hence, an increase in AD will increase NY by a multiple, leading to actual growth. [1] Also, the rise in I leads to accumulation of capital stock, where there will be an increase in quantity of resources (i.e., capital) in the economy <u>OR</u> more sophisticated machineries are adopted. Hence, the increase in quantity and quality of resources [1] leads to an increase in productive capacity, leading to an increase in potential growth. [1] As the investments aims to promote "energy efficiency", it prevents depletion of resources and also reduce pollution to the environment, which ensures that even future generations will not suffer from the repercussions of the production today [1]. Hence, the ability to attained both actual and potential growth without causing other significant economic problems allow sustainable growth to be attained.	
d)	**Describe the change in Vietnam's trade balance with US and China from 2018 to 2020.** Vietnam experiences a rising trade surplus with US [1], and a decreasing trade surplus with China [1] from 2018 to 2020. Note: if students wrote improved/ worsen, award one mark	[2]
e)	**With the use of a diagram, discuss the extent to which tariffs on imported clean tech products from China can grow the green tech industry in the US.** <u>Introduction</u> With the imposition of tariffs on clean tech products, it can help to encourage production of clean tech industry in US, but the extent may be limited as the production of clean tech can be diverted to other countries. <u>How tariffs on imported clean tech products can grow tech industry</u> Import tariffs refer to taxes on imports aimed at protecting domestic producers, in this case the tech producers in US, from foreign competition. With reference from Figure 2, assume that the world price of tech products is initially at P_w. In this case, the world supply curve, S_w, for domestic consumers is perfectly price elastic, as all domestic consumers can buy all they want at P_w, since an infinite amount of good is available at world price. However, at P_w, domestic producers are only willing to supply Q_1, but domestic consumers are willing to buy Q_2 units of sugar. Since $Q_2 > Q_1$, this implies that Q_1Q_2 will be imported. [1] When a specific tariff is imposed on imports, S_{world} will shift upwards to $S_{world+tariff}$, and P_w will now be increased to P_{w+t}. At this higher price, it can help to "shift clean tech production and employment from China to the U.S", as domestic producers are now willing to increase quantity supplied to Q_3, while domestic consumers will reduce quantity demanded to Q_4 units of clean tech products.[1]	[8]

Since quantity demanded by domestic consumers has decreased, while quantity supplied by domestic producers has increased, the amount of imports is reduced from Q_1Q_2 to Q_3Q_4 units of clean tech products. Thus, domestic producers can enjoy an increase share of the local market, which can help to grow the industry.[1]

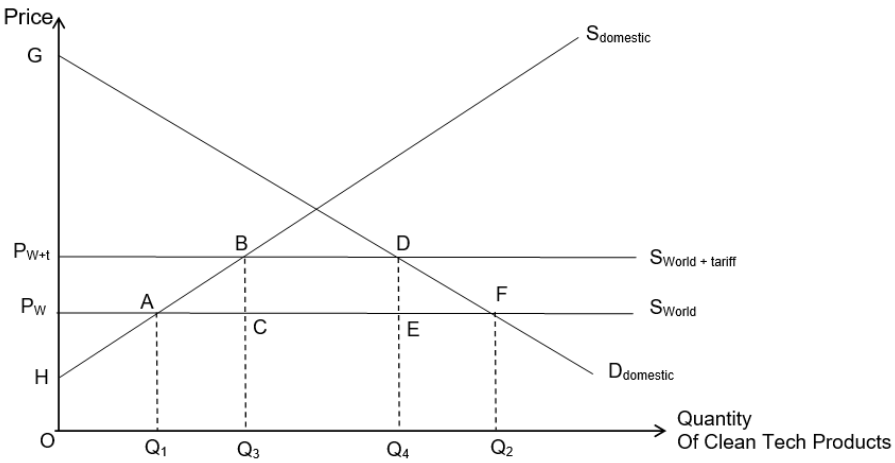


Figure 2 [1]

<u>How tariffs on imported clean tech products may not grow tech industry in US[2]</u>
Nonetheless, production of clean tech products may not necessarily shift from China to US. This is evidenced in extract 3 where it states a neutral effect on imports of renewable energy-related products to US. As mentioned in extract 3, "in response to the tariffs, production shifted from China to Vietnam and other Asian economies". This suggests clean tech firms from China & US are now doing offshoring in Vietnam instead of China.

Firstly, this is likely due to imports from Vietnam being more price competitive compared to imports from China where a tariff is imposed. As such, firms will likely move production to Vietnam to ensure price competitiveness. Hence, the number of clean tech producers in US may not increase, thus output does not increase.

OR
Secondly, this is also likely because, imports of clean tech product is still cheaper than domestic ones produced in US, as cost-savings from cheaper raw materials and labour in developing countries like Vietnam can be passed on to buyers in terms of lower prices. Hence, US could still be heavily importing clean tech products, just from a different country, instead of switching to US clean tech products. As seen from figure 1, Vietnam experiences a rising trade surplus with US, which could imply higher volume of Vietnam's exports to US. Thus demand for US clean tech products may not rise.

This suggest that both supply and demand for US's clean tech products may not rise, which suggests little growth in US's domestic production of clean tech.

OR
In addition, US tariffs on China has led to retaliation, and China is also imposing similar tariffs on US exports. Such "escalating trade war in clean tech" will "raises the costs of clean tech products" (extract 3). US firms thus face an increase the cost of production in clean tech products to be exported to China and cause the

supply of clean tech products to be reduced in US. Hence, the decrease in production will hinder the expansion of clean tech industry in US.

Evaluation + Recommendation [1+1]:
<*Evaluation*>To evaluate, the use of tariffs alone is insufficient to grow the clean tech industry in US, considering how there are many other alternatives available in this globalized world, making it easier to find cheaper substitutes.

<*Recommendation*>The US government should look into other policies, such as providing subsidies or tax concessions for domestic firms for them to enjoy a competitive advantage to increase their production and sell their goods at a lower price for both domestic consumers, as well as to foreign countries.

Level	Knowledge, Application, Understanding & Analysis	Marks
L2	Well-developed discussion on whether tariffs on imported green products can help to grow tech industry in US. Reference were made to evidence from extract that support the arguments made. Well-labelled and referenced tariffs diagram was drawn	4-6
L1	Under-developed discussion on whether tariffs on imported green products can help to grow tech industry in US, with some or no reference to case extract materials. OR Well-developed explanation on either the tariffs on imported green products will help or not help to grow the green tech industry. Some reference made to evidence from extract that support the arguments made. Tariff diagram may be drawn, but was incomplete or lack reference.	1-3
Evaluation		
E2	A well-reasoned evaluation point on whether tariffs on imported green products can help to grow tech industry in US plus a recommendation	2
E1	A well-reasoned evaluation point	1

(f)	**Discuss whether participation in global supply chains poses more risks or rewards to an economy.** An economy with firms whose assembly line span across multiple countries are part of the global supply chain. <u>1ST POV:</u> Risk of globalisation in terms of potential -ve impact on economy There is an increased risk of bottleneck for firms who "rely on a specific supplier somewhere else for a crucial component or material" (extract 4), especially in times of crises like the pandemic where lockdowns may result in difficulty obtaining imported factor inputs or intermediate goods. As a result, this results in the economy risking sharp rises in unit cost of production, which results in a fall in SRAS. Assuming the economy is below full employment, this results in shortage of final goods and services at the original general price level, to which firms will respond by raising prices. As price rises, spending on goods and services will fall. General price level will continue to rise until shortage is eliminated, at a new higher equilibrium GPL, contributing to cost-push inflation. At the same time, firms will also cut down on production as spending on goods and services fall, resulting in a fall in real GDP, contributing to negative actual growth. With increased flow of goods & services across economies, it may cause balance of trade to worsen. This is evident from how increased offshoring to Vietnam has led to US's worsening BOT deficit with Vietnam, implied by Vietnam's rising BOT surplus with US (figure 1). If the BOT deficit is excessively large and the government has to finance it with huge external debt, it may result in a loss of future SOL due to significant government revenue channeled towards less productive use of interest repayments compared to fiscal spending or transfer payments to citizens. <u>2nd POV:</u> Rewards of globalisation in terms of +ve impact on economy Firms have multiple consumer bases to tap on overseas, which may boost demand for exports in other countries when domestic demand is weak (extract 4). Thus, a rise in X would likely dampen any fall in C, thus resulting in smaller falls in AD in times of a local recession. As a result, this dampens the multiple fall in real GDP. Also, from extract 4, increased competition forces firms to use capital and manufacturing capacity more productively, which suggests that firms are likely to be more productively efficient, thus lowering their average cost of production. As a result, this could suggest a rise in SRAS, which may combat cost-push inflation. From extract 3, it states that "low-cost solar modules and wind turbines, produced mainly in China, have reduced price of clean technologies globally, thereby encouraging their use." Therefore, due to the greater flow of goods & services, there is greater access to more affordable clean technologies for economies. This would encourage adoption of clean technology, which boosts quality of capital while slowing the depletion of non-renewable resources. Thus,	[10]

productive capacity increases, and LRAS increases. This facilitates sustainable growth.

OR

Also, given that "global firms with extensive supply-chain operations…suffer share-price declines when foreign climate events disrupt their global supply chains…which gives them a stake in seeing climate finance progress at the international level." (extract 3). It is more likely that green investments are financed or even helmed by firms in countries part of the global supply chain. This suggest there is an increase in quality of capital while slowing the depletion of resources and environmental degradation. Thus, productive capacity increases, and LRAS increases. This facilitates sustainable growth.

EV (2+1 or 1*+1):
<*One well developed evaluation*> Ultimately, whether it poses more risk or reward depends on the extent of diversification of supply chain. As pointed in extract 4, risk of negative impact is higher if production of a good/component only takes place in 1 plant or country. However, economies open to free-trade agreements like Singapore would likely see such risk minimized as free-trade agreements can help to facilitate diversification of sources of factor inputs/production plants. This is especially so in contrast with countries like US who practice protectionism, which inadvertently may force US firms to be less diversified in terms of where they set up production plants so as to avoid tariffs (extract 3).

<*Recommendation/ stand*>Therefore, countries highly open to free trade are likely to enjoy more risks than rewards.

Knowledge, Understanding, Application and Analysis		
L2	For a developed discussion on risk and reward on an economy. Developed answers should include clear elaboration on how globalization will help in moving the economy closer to, or further away from a range of macroeconomic goals.	4-7
L1	For an undeveloped discussion on how globalisation will help in moving the economy closer to, or further away from its macroeconomic goals.	1-3
Evaluation		
E2	For answers that consist of at least 1 well-developed evaluation point and a judgement on whether globalization brings more risks or reward to an economy.	2-3
E1	For answers that consist of an evaluative point that is explained or attempted a judgment on whether globalization brings more risks or reward to an economy.	1